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AUTHOR Silverman, Ellen-Marie
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ABSTRACT

In 1922, Otto Jespersen hypothesized that women were more fluent (exhibited less hesitation in oral expression) than men because they had smaller and more central vocabularies, consisting of common words and combinations. Men's vocabularies were considered more extensive due to the inclusion of numerous novel, technical, and infrequently used words. The purpose of this study was to test the validity of Jespersen's hypothesis. Twenty university students, ten females and ten males, were matched on the basis of chronological age, socioeconomic status, and variables shown to influence fluency levels and vocabulary. Each subject then described "a memorable life experience," which was recorded on a three-minute tape. Data reported do not support the notion that women are more verbally fluent than men. In addition, no significant difference in the nature of men and women's vocabulary was revealed. While findings tend to refute Jespersen's hypothesis, it may be possible that a dramatic change in women's language patterns has occurred since the theory was posited, or that a statistical error due to the small sample population may have contaminated the results. (KS)

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THE FLUENCY OF WOMEN'S SPEECH

Ellen-Marie Silverman

Marquette University, Milwaukee, Wisconsin

Catherine H. Zimmer

University of Wisconsin-Milwaukee, Milwaukee, Wisconsin

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the Languages of American Women
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Ellen-Marie Silverman

Marquette University, Milwaukee, Wisconsin

Catherine H. Zimmer

University of Wisconsin-Milwaukee, Milwaukee, Wisconsin

A purpose of this conference is to develop strategies for describing the languages of American women. One approach to the task of describing their languages would be to identify the ways in which they are both similar to and different from the languages used by American men. Comparison of women's languages with men's would enable one to determine whether behaviors observed in the languages of American women were genuine features of their languages or merely attributes of American languages.

The study reported here is a comparison of women's and men's languages in relation to one parameter of language behavior, speech fluency. (Speech fluency refers to the "flow" of speech and is inversely related to the number of hesitations--pauses, repetitions, self--corrections--produced when speaking.) Jespersen (1922:248-249) hypothesized that women are more fluent (that is, less hesitant) than men because they have smaller and more "central" vocabularies, that is, vocabularies consisting primarily of "everyday" words and combinations. Men's vocabularies, by contrast, were considered more extensive due to the inclusion of numerous novel, technical, and infrequently used words. Thus, Jespersen (1922:252-253) reasoned by analogy that women are more fluent than men in the same fashion that people exit more quickly from a church when it is almost empty than when there is a crowd at the door. Women's greater speech fluency, then, a consequence of limited and presumably limiting vocabularies, was thought to be evidenced, in part, by

a "superior readiness of speech" (Jespersen 1922:258).

While there have been a few attempts to compare the speech fluency of women and men, the results have been equivocal (for example, Johnson 1961:1-20). Johnson (1961) reported that on one extemporaneous speaking task women were more fluent than men while on a second such task he found no difference between the groups.

To the best of our knowledge, there have been no attempts to directly test Jespersen's (1922) hypothesis. The purpose of this study was to provide such a test by comparing the fluency levels, vocabularies, and readiness of speech of 20 university students, 10 men and 10 women. They had been matched on the bases of chronological age (one year) and socio-economic status (parents' occupations), variables shown to influence speech fluency level (Yairi and Clifton 1972) and vocabulary (Bernstein 1966), respectively. The mean age for the female subjects was 24.3 years, for the male subjects 25.3 years. The majority of the subjects' parents were blue-collar workers.

The protocol of the experiment involved tape-recording each subject's speech in a sound-treated room. The subject was seated at a table facing a wall. The experimenter sat at another table behind and to the right of the subject in order to minimize cues the experimenter might have conveyed to the subject concerning his/her performance on the task. The subject was then given a card with the topic " A Memorable Life Experience" written on it and was instructed to begin speaking when ready and to continue for three minutes (experimenter timed). A three minute sample is long enough to be reliable (Johnson 1961) but not too long so as to be difficult for subjects to perform.

Verbatim transcripts were prepared from the recordings as a preliminary to the fluency and vocabulary analyses. The fluency analysis involved

listening to the recordings, marking the location of hesitations on the transcripts, and computing the percentage of words spoken hesitatingly in each sample. The types of hesitation identified were those described by Maclay and Osgood (1959). They were four in number: (1) filled pauses, the insertion of um's, er's, and the like into the speech stream; (2) unfilled pauses, unusually long silent gaps or the nonphonemic lengthening of phonemes; (3) repeats, repetitions of parts of words, whole-words, and/or phrases; and (4) false starts, self-corrections of a phonological, syntactic, or semantic nature. This analysis was performed by the first author whose reliability in the identification of hesitations produced during spontaneous speech is considered satisfactory (Silverman 1972).

The vocabulary analysis consisted of computing a Type Token Ratio (Johnson 1946) for each sample. The Type Token Ratio (TTR) is the percentage of different words spoken. A small TTR would correspond to a more central vocabulary than would a large TTR since a more extensive vocabulary would result from the addition of more "different" words to a nuclear, or everyday, vocabulary.

Latency (in seconds) from presentation of the topic to the onset of speech was recorded as an indication of readiness of speech.

All of the subjects were able to perform the task although several, both men and women, required prompting with leading-type questions in order to continue talking the entire three minutes. There was no observable difference between the groups in the amount of talking. The average sample for the men was 409 words, with a range of 250 to 627 words, and for the women 406 words, with a range of 227 to 586 words. There does appear to be a difference, however, in the types of experiences described. Approximately one-half the experiences related by both groups were readily classifiable. Of these, the experience common to both groups was travel, with two of the

men and three of the women describing trips they had taken either within the United States or abroad. Additionally, four of the men related experiences they had had with death or extreme personal danger, and three women talked about their current or future occupations. None of the men talked about occupations, and none of the women related experiences dealing with personal danger or death.

The fluency data is presented in Table 1. As can be observed, the average woman tended to be more fluent relating her memorable life experience than did the average man, although the difference in their overall fluency levels was not statistically significant ($t=1.04$; $df=18$; t-test for unrelated measures). On the average the women tended to repeat words and parts of words less often than the men and to produce fewer filled pauses. They did, however, exhibit more frequent silent pauses than the men. We will pick up on this latter observation after we have presented all our findings.

TABLE 1. The mean percentage of hesitations in the speech of 10 men and 10 women during an extemporaneous speaking task.

Hesitations	Men	Women
Filled Pauses	4.8	4.2
Repeats	1.8	.8
False Starts	1.8	1.4
Unfilled Pauses	1.6	2.3
TOTAL	10.2	8.7

Interestingly, both the most fluent subject and the least fluent subject were women. The fluency range for the women was 4.8% of their words spoken hesitatingly to 15.5%. For the men, it was 7.6% to 13.7%. These data suggest a greater fluency range for women than men, contrary to Jespersen's (1922:258) assertion that "women do not reach the same extreme points as men, but are nearer the average in most respects."

There were no statistically significant differences between the groups either in vocabulary or in readiness of speech. The mean TTR's for the women and the men were .64 and .63, respectively ($t=1.01$; $df=18$; t-test for unrelated measures). The mean latency for the women was 17.9 seconds, for the men 9.6 seconds ($t=1.46$; $df=18$; t-test for unrelated measures). Thus, the women's vocabularies were no more central than the men's, and there was no indication that the women had a superior readiness of speech. In fact, they tended to wait longer than the men after presentation of the topic before beginning to speak.

The data we have reported here are inconsistent with Jespersen's hypothesis that women are basically more fluent than men. Our female subjects were as fluent as our male subjects relating their memorable life experiences and while doing so used vocabularies similar to the men's. Furthermore, they tended both to wait longer before beginning to speak and to exhibit more frequent silent pauses, behaviors Jespersen predicted would occur more often in men's more thoughtful and more hesitant speech. There are several possible explanations for the discrepancy between our findings and those that would have been predicted by Jespersen's hypothesis. First, Jespersen's theory may be inaccurate. To the best of our knowledge, there have been no tests of his hypothesis. Therefore, its accuracy is questionable. Second, while it may have been accurate when proposed in 1922, women's languages may have changed sufficiently by 1975 so as to render the hypothesis currently unten-

able. And third, the limited number of subjects in our study may have caused us to commit a Type II statistical error--that is, retaining a false null hypothesis.

What emerges here, then, is the need to further compare women's and men's speech fluency. An enlightening approach would seem to be to observe women's speech fluency in a variety of speaking situations. Such data would then permit a more vigorous evaluation of Jespersen's hypothesis as well as resulting in a more definitive description of women's speech fluency.

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